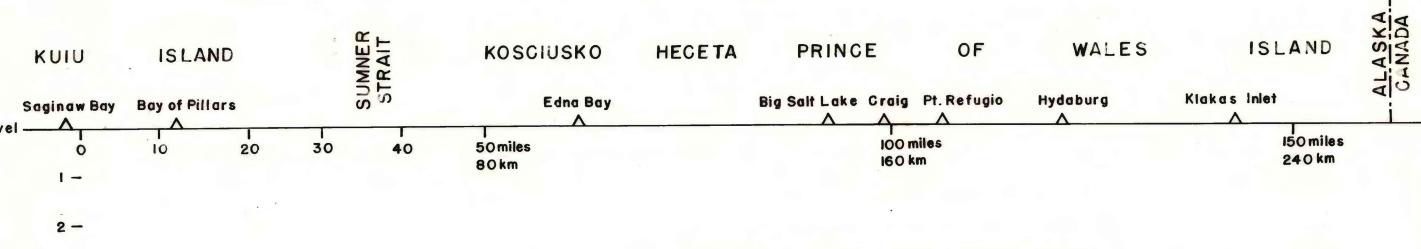
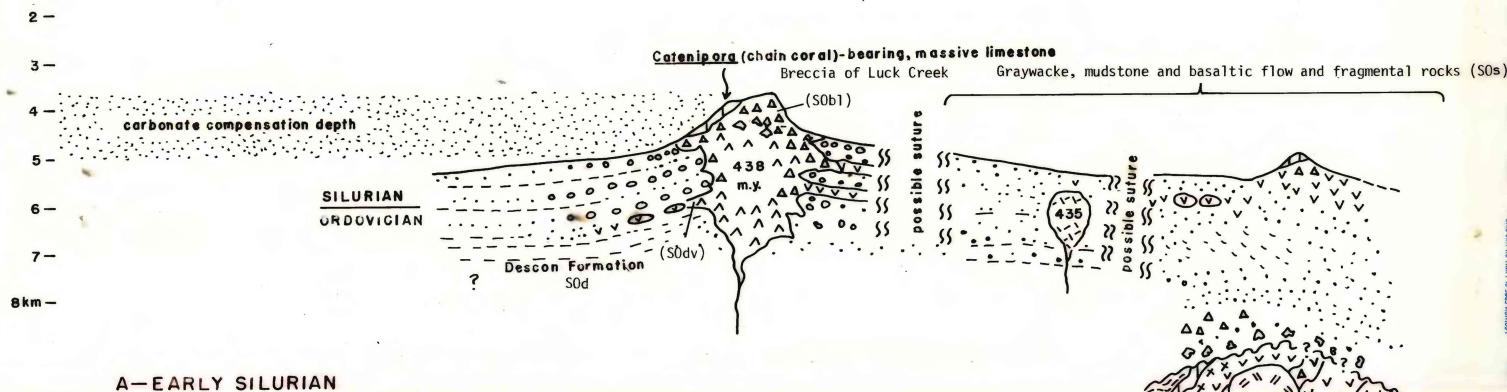
NW

SE

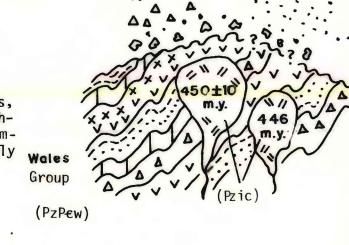
Figure 7. Reconstruction of stages in the development of the Alexander Terrane. Ordovician through Pennsylvanian rocks show a sequence of sedimentary and volcanic environments related to a generally upward-shoaling cycle of volcanic arcs.

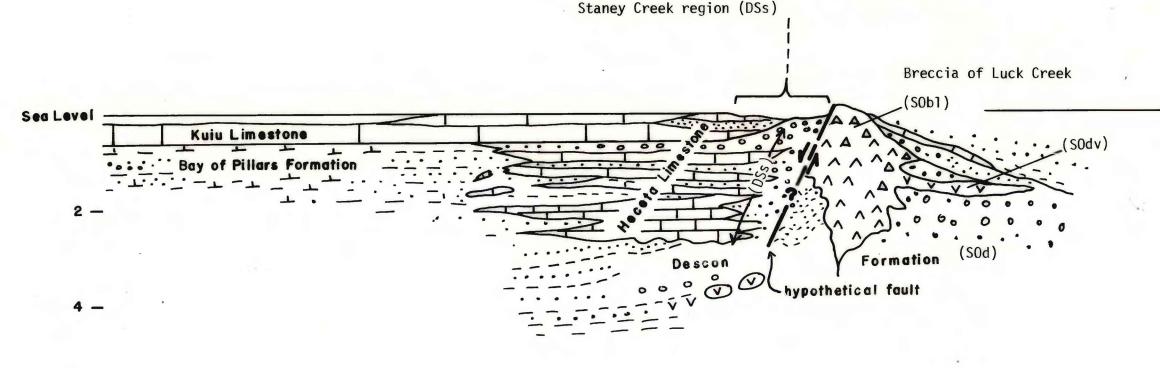




Limestone, sandstone, mudstone and conglomerate of

Early Ordovician through Early Silurian was a time of thick accumulation of graptolitic shale, graywacke turbidites, pillow basalt, tuff, and breccia in deep water mainly below the carbonate compensation depth. Basement unknown in northern area, basement apparently is Wales Group (remnant volcanic arc of pre-Middle Ordovician and Precambrian(?) age metamorphosed mainly to greenschist). General upward shoaling reached the carbonate compensation depth only locally by latest Ordovician time.

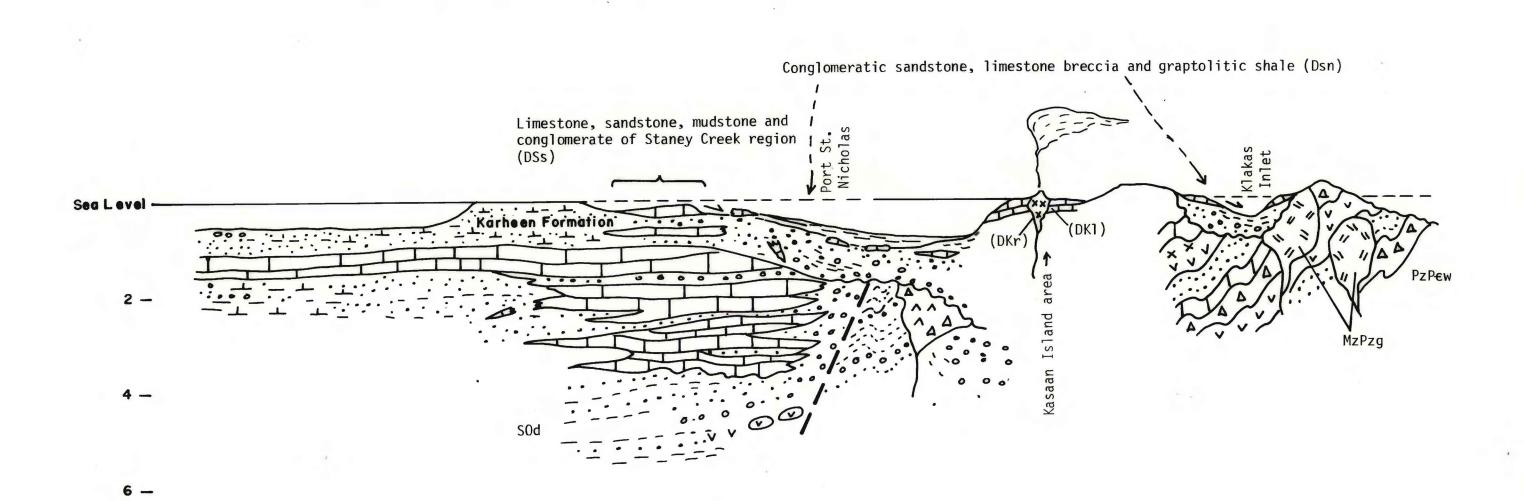




B-LATE SILURIAN

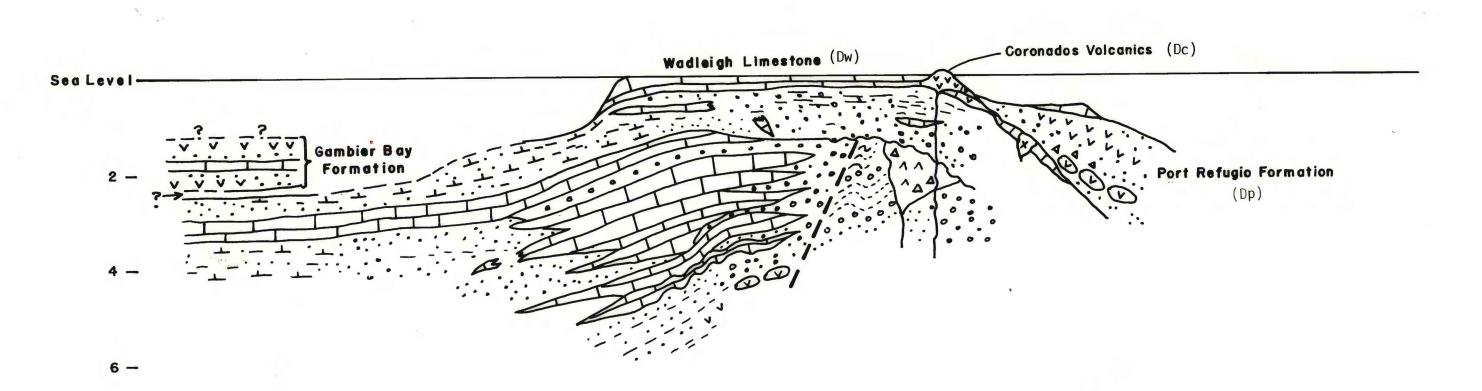
6km -

From Early Silurian through Late Silurian time, continued shoaling resulted in volcanic islands mantled by thick wedges of volcanic red-bed conglomerate and sandstone (DSs) that intertongued with fringing carbonate bank and reef deposits Heceta Limestone (Sh). Farther offshore, deeper water, volcanic-rich turbidites (SOJ) were succeeded by limestone by the end of the Silurian. The hypothetical fault shows uplift of a Descon Formation's volcanic center, producing wedges of volcanic detritus in Heceta Limestone and the absence of Heceta at Craig and farther south.



Skm - C-EARLY DEVONIAN

Uplift and deep erosion of earlier volcanic-arc assemblages in the south were followed by deeper water deposition of graptolitic shale, turbidite, and conglomerate-breccia (Dsn) rich in reworked shelly fossils (olistostromes). In northern area, intertidal and beach deposits of red-bed mudstone and sandstone Karheen Formation (Dk) were deposited conformably on Silurian Heceta Limestone (Sh). Rhyolite tuff (DKr) was interlayered with biogenic limestone (DK1) on Kasaan Island.

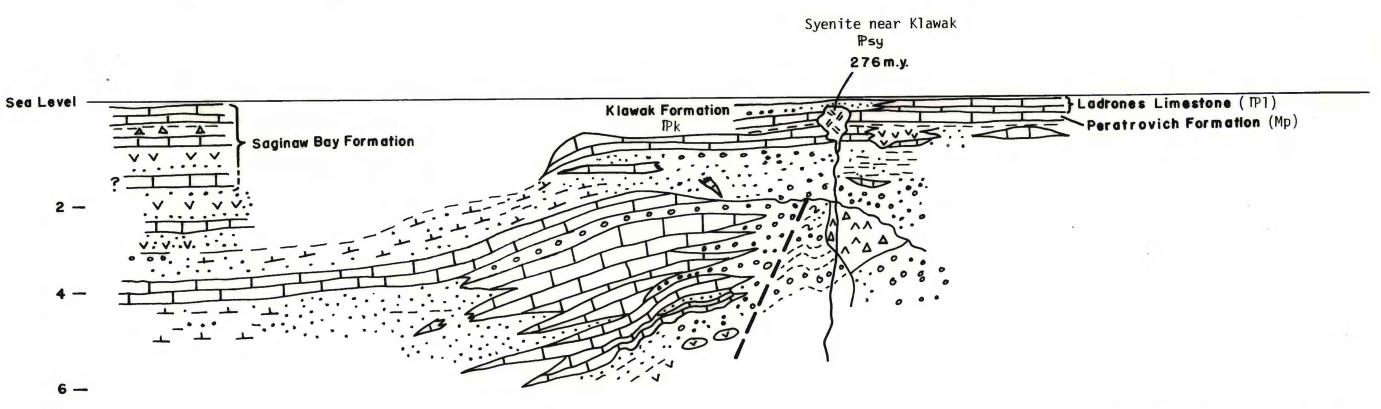


D-MIDDLE AND LATE DEVONIAN

8km -

8km -

Basalt islands and submarine highs(Coronados Volcanics (Dc))were fringed by shallow-water coral reefs and carbonate banks(Wadleigh Limestone (Dw)). Volcanic- detritus-rich turbidites(Port Refugio Formation (Dp))were deposited in deeper summit or forearc basins.



E-LATE CARBONIFEROUS

Shallow-water biogenic reef and carbonate-bank deposits--Peratrovich Fm (Mp) and Ladrones Limestone (PI)--covered earlier volcaniclastic beds of Porto Refugio Formation (Dp) and Wadleigh Limestone (Dw). Sandstone, mudstone, conglomerate and minor limestone of Klawak Formation (Pk) developed north of purer limestone bank deposits of Ladrones (PI).

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards.